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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,979	07/10/2001	Yoshimi Ishibashi	SAE-024	6945
20374	7590	05/05/2004	EXAMINER	
KUBOVCIK & KUBOVCIK SUITE 710 900 17TH STREET NW WASHINGTON, DC 20006			DICUS, TAMRA	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/900,979

**Applicant(s)**

ISHIBASHI ET AL.

**Examiner**

Tamra L. Dicus

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 6-14, 16, 19-20, 25-33 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1, 6-14, 16, 19, 20 and 25-33 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The Examiner acknowledges canceled claims 2-5, 15, 17-18, and 21-24. The rejections of the prior Office Action of Paper No. 7, are withdrawn. The finality is thereby withdrawn due to Applicant's arguments and prosecution is reopened.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6-14, 16, 20 and 25-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,139,065 to Washburn et al. in view of USPN 6,199,911 to Isherwood et al., and US Publication 2003/0186810A1 to Kato et al.

3. Washburn teaches a security paper with a filament bonded and embedded in a paper support. See col. 4, line 26. Washburn teaches the use of adhesive on security filaments such as synthetic thread, which may be fluorescent, in order to adhere to paper at col. 1, line 64-66. See further col. 5, line 65-col. 6, line 10, and lines 33-38. Also Washburn teaches calendaring rolls may be used to apply pressure and heat to the filaments to laminate it to the paper at col. 2, lines 1-11. At col. 3, lines 42-50, Washburn discloses suitable adhesives may be used such as ultraviolet, water base, or pressure-sensitive adhesives, all of which are equivalent to in water or organic solvent mediums for forming adhesive. Washburn teaches filaments may have different colors, widths, shapes or any combination of the same to further enhance security features of the security paper at col. 6, lines 50-54. Such security filaments and threads are ribbon-shaped

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having the structural requirements as recited in amended claim 1. Washburn is silent to the thickness of the support and thread, while Washburn does mention at col. 4, lines 29-30, paper thickness may be adjusted. Isherwood discloses a variety of security elements (see Figures) applied to a security document which may be metallized or colored. Isherwood discloses it is well known to color, coat, metallize, and vapor deposit metal such as Al or another metal onto security elements such as thread or strips (ribbon) made of synthetic film such as polyester at col. 1, lines 23-25, lines 48-50, col. 4, lines 1-15, lines 38-45 and col. 2, lines 40-55. Isherwood further teaches a thread or security element having a width of at least 0.5 mm, which falls in the range of 0.3mm to 20 mm as claimed in claims 1, 9 and 28; the thickness of 10 to 80 microns is inherent since width multiplied by width equals thickness. Addressing the ratio of thickness of the paper to the security element of synthetic film and metal layers of claims 1, 7, 20, 26, it would have been obvious to one of ordinary skill in the art to produce a thickness ratio of paper to coated security thread/element, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The thickness of each (paper and security element) determines what the ratio will be. Thickness is optimizable - the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render Applicant's claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233.

Regarding claim 11, how the adhesive layer contacts the paper support, e.g. "by contact...and water when the element...is embedded...during paper making...heat applied...", these involve process limitations which are given no patentable weight. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the

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steps. Patentability of an article depends on the article itself and not the method used to produce it (see MPEP 2113). Furthermore, the invention defined by a product-by-process invention is a product NOT a process. *In re Bridgeford*, 357 F. 2d 679. It is the patentability of the product claimed and NOT of the recited process steps which must be established. *In re Brown*, 459 F. 2d 531. Both Applicant's and prior art reference's product are the same.

Washburn does not state the application amount of  $1 \text{ g/m}^2$  to  $10 \text{ g/m}^2$ . However, it would have been obvious to one of ordinary skill in the art to produce a coating application amount of  $1 \text{ g/m}^2$  to  $10 \text{ g/m}^2$ , since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The amount of coating directly effects the thickness.

Washburn does not state the paper has a recording layer that is heat-sensitive with a binder and electron-donating and electron-accepting compound. However, Kato teaches a heat-sensitive recording material including an electron-accepting, and electron-donating compound and binder, at [0014], [0027], [0028], and [0192] for security documents. Kato teaches suitable binders are water-soluble such as polyvinyl alcohol, among others ( [0193] of Kato). Washburn and Kato are analogous art because both references are in the same field of endeavor, such as the security document technology. Hence it would have been obvious to one of ordinary skill in the art to modify the paper of Washburn to further include a recording layer having a binder and compound as recited because Kato teaches the aforesaid ingredients are useful in security documents retaining excellent recording images ([0019] of Kato).

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Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,139,065 to Washburn et al. in view of USPN 6,199,911 to Isherwood et al., US Publication 2003/0186810A1 to Kato et al., as applied to claim 1 above, and further in view of USPN 5525400 to Manser et al.

4. Washburn is relied upon above. Regarding claim 19, Washburn does not teach an intermediate-coating layer which is in between the paper and recording layer. However, Manser teaches an intermediate-coating for paper and recording layers that comprises a hollow thermoplastic (organic particles) at col. 1, lines 50-55. The interlayer is especially suited for enhancing proof against tampering at col. 4, lines 40-45 and is used adjacent to paper as shown in Example 2. Washburn and Manser are analogous art because both references are in the same field of endeavor, such as the security document technology. It would have been obvious to one of ordinary skill in the art to modify the paper of Washburn to further include an interlayer comprised of a hollow organic particle because Manser teaches the composition and construction is suitable to enhance security measures as cited above.

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Washburn is still relied upon as Washburn teaches recording paper and the process of making it. Accordingly, Isherwood teaches recording paper and modifications to paper for security or aesthetic reasons.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5516153 to Kaule teaches security documents.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is (703) 305-3809. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8329 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Tamra L. Dicus  
Examiner  
Art Unit 1774

April 30, 2004

CYNTHIA H. KELLY  
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